# Gengfeng Zheng

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 108 papers | 16,474 citations | 31976 53 h-index | 27406 106 g-index |
| 111 all docs | 111 docs citations | 111 times ranked | 17722 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Multiplexed electrical detection of cancer markers with nanowire sensor arrays. Nature Biotechnology, 2005, 23, 1294-1301. | 17.5 | 2,249 |
| 2 | Electrical detection of single viruses. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 14017-14022. | 7.1 | 1,208 |
| 3 | Reduced Mesoporous Co<sub>3</sub>O<sub>4</sub> Nanowires as Efficient Water Oxidation Electrocatalysts and Supercapacitor Electrodes. Advanced Energy Materials, 2014, 4, 1400696. | 19.5 | 852 |
| 4 | Boron-Doped Graphene for Electrocatalytic N2 Reduction. Joule, 2018, 2, 1610-1622. | 24.0 | 774 |
| 5 | Fabrication of silicon nanowire devices for ultrasensitive, label-free, real-time detection of biological and chemical species. Nature Protocols, 2006, 1, 1711-1724. | 12.0 | 709 |
| 6 | Enhanced Nitrate-to-Ammonia Activity on Copperâ€“Nickel Alloys via Tuning of Intermediate Adsorption. Journal of the American Chemical Society, 2020, 142, 5702-5708. | 13.7 | 638 |
| 7 | Cu, Coâ€Embedded Nâ€Enriched Mesoporous Carbon for Efficient Oxygen Reduction and Hydrogen Evolution Reactions. Advanced Energy Materials, 2017, 7, 1700193. | 19.5 | 487 |
| 8 | Single-Atomic Cu with Multiple Oxygen Vacancies on Ceria for Electrocatalytic CO<sub>2</sub> Reduction to CH<sub>4</sub>. ACS Catalysis, 2018, 8, 7113-7119. | 11.2 | 486 |
| 9 | Defect and Interface Engineering for Aqueous Electrocatalytic CO2 Reduction. Joule, 2018, 2, 2551-2582. | 24.0 | 459 |
| 10 | From Water Oxidation to Reduction: Homologous Niâ€“Co Based Nanowires as Complementary Water Splitting Electrocatalysts. Advanced Energy Materials, 2015, 5, 1402031. | 19.5 | 448 |
| 11 | Synthesis and Fabrication of High-Performance n-Type Silicon Nanowire Transistors. Advanced Materials, 2004, 16, 1890-1893. | 21.0 | 417 |
| 12 | Nanoparticle Superlattices as Efficient Bifunctional Electrocatalysts for Water Splitting. Journal of the American Chemical Society, 2015, 137, 14305-14312. | 13.7 | 377 |
| 13 | Boosting CO<sub>2</sub> Electroreduction to CH<sub>4</sub> via Tuning Neighboring Single-Copper Sites. ACS Energy Letters, 2020, 5, 1044-1053. | 17.4 | 326 |
| 14 | Doping strain induced bi-Ti3+ pairs for efficient N2 activation and electrocatalytic fixation. Nature Communications, 2019, 10, 2877. | 12.8 | 279 |
| 15 | Oneâ€Dimensional Earthâ€Abundant Nanomaterials for Waterâ€Splitting Electrocatalysts. Advanced Science, 2017, 4, 1600380. | 11.2 | 253 |
| 16 | CuCo Hybrid Oxides as Bifunctional Electrocatalyst for Efficient Water Splitting. Advanced Functional Materials, 2016, 26, 8555-8561. | 14.9 | 251 |
| 17 | Coâ€“Niâ€Based Nanotubes/Nanosheets as Efficient Water Splitting Electrocatalysts. Advanced Energy Materials, 2016, 6, 1501661. | 19.5 | 232 |
| 18 | Enhancing Perovskite Solar Cell Performance by Interface Engineering Using CH<sub>3</sub>NH<sub>3</sub>PbBr<sub>0.9</sub>I<sub>2.1</sub> Quantum Dots. Journal of the American Chemical Society, 2016, 138, 8581-8587. | 13.7 | 232 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Superb Alkaline Hydrogen Evolution and Simultaneous Electricity Generation by Ptâ€Decorated Ni<sub>3</sub>N Nanosheets. Advanced Energy Materials, 2017, 7, 1601390. | 19.5 | 225 |
| 20 | Aqueous electrocatalytic N2 reduction under ambient conditions. Nano Research, 2018, 11, 2992-3008. | 10.4 | 221 |
| 21 | Selective Etching of Nitrogenâ€Doped Carbon by Steam for Enhanced Electrochemical CO<sub>2</sub> Reduction. Advanced Energy Materials, 2017, 7, 1701456. | 19.5 | 203 |
| 22 | Carbon-Coated Co<sup>3+</sup>-Rich Cobalt Selenide Derived from ZIF-67 for Efficient Electrochemical Water Oxidation. ACS Applied Materials & Interfaces, 2016, 8, 20534-20539. | 8.0 | 198 |
| 23 | Efficient Electrocatalytic CO2 Reduction to C2+ Alcohols at Defect-Site-Rich Cu Surface. Joule, 2021, 5, 429-440. | 24.0 | 194 |
| 24 | Tuning of CO<sub>2</sub> Reduction Selectivity on Metal Electrocatalysts. Small, 2017, 13, 1701809. | 10.0 | 182 |
| 25 | Topotactic Engineering of Ultrathin 2D Nonlayered Nickel Selenides for Full Water Electrolysis. Advanced Energy Materials, 2018, 8, 1702704. | 19.5 | 181 |
| 26 | Eggâ€Derived Mesoporous Carbon Microspheres as Bifunctional Oxygen Evolution and Oxygen Reduction Electrocatalysts. Advanced Energy Materials, 2016, 6, 1600794. | 19.5 | 177 |
| 27 | Nanostructured Bifunctional Redox Electrocatalysts. Small, 2016, 12, 5656-5675. | 10.0 | 174 |
| 28 | Double sulfur vacancies by lithium tuning enhance CO2 electroreduction to n-propanol. Nature Communications, 2021, 12, 1580. | 12.8 | 162 |
| 29 | Incorporation of well-dispersed sub-5-nm graphitic pencil nanodots into ordered mesoporous frameworks. Nature Chemistry, 2016, 8, 171-178. | 13.6 | 153 |
| 30 | Oxygen Vacancy Tuning toward Efficient Electrocatalytic CO<sub>2</sub> Reduction to C<sub>2</sub>H<sub>4</sub>. Small Methods, 2019, 3, 1800449. | 8.6 | 146 |
| 31 | Designing Copperâ€Based Catalysts for Efficient Carbon Dioxide Electroreduction. Advanced Materials, 2021, 33, e2005798. | 21.0 | 145 |
| 32 | Nanostructured Copperâ€Based Electrocatalysts for CO<sub>2</sub> Reduction. Small Methods, 2018, 2, 1800121. | 8.6 | 139 |
| 33 | Polarization Engineering of Covalent Triazine Frameworks for Highly Efficient Photosynthesis of Hydrogen Peroxide from Molecular Oxygen and Water. Advanced Materials, 2022, 34, e2110266. | 21.0 | 136 |
| 34 | A Crystalline Partially Fluorinated Triazine Covalent Organic Framework for Efficient Photosynthesis of Hydrogen Peroxide. Angewandte Chemie - International Edition, 2022, 61, . | 13.8 | 121 |
| 35 | Oxygen vacancies enhanced cooperative electrocatalytic reduction of carbon dioxide and nitrite ions to urea. Journal of Colloid and Interface Science, 2020, 577, 109-114. | 9.4 | 120 |
| 36 | Selective CO-to-acetate electroreduction via intermediate adsorption tuning on ordered Cuâ€“Pd sites. Nature Catalysis, 2022, 5, 251-258. | 34.4 | 118 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Electronâ€Deficient Cu Sites on Cu<sub>3</sub>Ag<sub>1</sub> Catalyst Promoting CO<sub>2</sub> Electroreduction to Alcohols. Advanced Energy Materials, 2020, 10, 2001987. | 19.5 | 117 |
| 38 | NbO<sub>2</sub> Electrocatalyst Toward 32% Faradaic Efficiency for N<sub>2</sub> Fixation. Small Methods, 2019, 3, 1800386. | 8.6 | 111 |
| 39 | CuCoO<sub><i>x</i></sub>/FeOOH Coreâ€“Shell Nanowires as an Efficient Bifunctional Oxygen Evolution and Reduction Catalyst. ACS Energy Letters, 2017, 2, 2498-2505. | 17.4 | 109 |
| 40 | Aligned NiO nanoflake arrays grown on copper as high capacity lithium-ion battery anodes. Journal of Materials Chemistry, 2012, 22, 19821. | 6.7 | 106 |
| 41 | A flexible ligand-based wavy layered metalâ€“organic framework for lithium-ion storage. Journal of Colloid and Interface Science, 2015, 445, 320-325. | 9.4 | 102 |
| 42 | Enhanced N-doping in mesoporous carbon for efficient electrocatalytic CO2 conversion. Nano Research, 2019, 12, 2324-2329. | 10.4 | 101 |
| 43 | Efficient solar-driven electrocatalytic CO2 reduction in a redox-medium-assisted system. Nature Communications, 2018, 9, 5003. | 12.8 | 97 |
| 44 | Bioâ€Inspired Leafâ€Mimicking Nanosheet/Nanotube Heterostructure as a Highly Efficient Oxygen Evolution Catalyst. Advanced Science, 2015, 2, 1500003. | 11.2 | 90 |
| 45 | Bifunctional CoP and CoN porous nanocatalysts derived from ZIF-67 in situ grown on nanowire photoelectrodes for efficient photoelectrochemical water splitting and CO<sub>2</sub> reduction. Journal of Materials Chemistry A, 2016, 4, 15353-15360. | 10.3 | 90 |
| 46 | Nanowire arrays restore vision in blind mice. Nature Communications, 2018, 9, 786. | 12.8 | 89 |
| 47 | Electronic Tuning of Co, Niâ€Based Nanostructured (Hydr)oxides for Aqueous Electrocatalysis. Advanced Functional Materials, 2018, 28, 1804886. | 14.9 | 87 |
| 48 | Mesoporous TiO<sub>2</sub> Mesocrystals: Remarkable Defects-Induced Crystallite-Interface Reactivity and Their in Situ Conversion to Single Crystals. ACS Central Science, 2015, 1, 400-408. | 11.3 | 74 |
| 49 | Sub-5Ânm SnO<sub>2</sub> chemically coupled hollow carbon spheres for efficient electrocatalytic CO<sub>2</sub> reduction. Journal of Materials Chemistry A, 2018, 6, 20121-20127. | 10.3 | 72 |
| 50 | 2020 Roadmap on gas-involved photo- and electro- catalysis. Chinese Chemical Letters, 2019, 30, 2089-2109. | 9.0 | 71 |
| 51 | Defective graphene for electrocatalytic CO2 reduction. Journal of Colloid and Interface Science, 2019, 534, 332-337. | 9.4 | 66 |
| 52 | Electrocatalytic Reactions for Converting CO<sub>2</sub> to Valueâ€Added Products. Small Science, 2021, 1, 2100043. | 9.9 | 66 |
| 53 | Electron Localization and Lattice Strain Induced by Surface Lithium Doping Enable Ampereâ€Level Electrosynthesis of Formate from CO<sub>2</sub>. Angewandte Chemie - International Edition, 2021, 60, 25741-25745. | 13.8 | 66 |
| 54 | Dual-Atomic Cu Sites for Electrocatalytic CO Reduction to C<sub>2+</sub> Products. , 2021, 3, 1729-1737. |  | 66 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Selective carbon dioxide electroreduction to ethylene and ethanol by core-shell copper/cuprous oxide. Journal of Colloid and Interface Science, 2019, 552, 426-431. | 9.4 | 53 |
| 56 | Achieving High Aqueous Energy Storage via Hydrogenâ€Generation Passivation. Advanced Materials, 2016, 28, 7626-7632. | 21.0 | 51 |
| 57 | 2D Assembly of Confined Space toward Enhanced CO<sub>2</sub> Electroreduction. Advanced Energy Materials, 2018, 8, 1801230. | 19.5 | 49 |
| 58 | Lithiationâ€Enabled Highâ€Density Nitrogen Vacancies Electrocatalyze CO<sub>2</sub> to C<sub>2</sub> Products. Advanced Materials, 2021, 33, e2103150. | 21.0 | 48 |
| 59 | Electron distribution tuning of fluorine-doped carbon for ammonia electrosynthesis. Journal of Materials Chemistry A, 2019, 7, 16979-16983. | 10.3 | 46 |
| 60 | Ru-doped, oxygen-vacancy-containing CeO<sub>2</sub> nanorods toward N<sub>2</sub> electroreduction. Journal of Materials Chemistry A, 2020, 8, 7229-7234. | 10.3 | 45 |
| 61 | Mesoporous tin oxide for electrocatalytic CO2 reduction. Journal of Colloid and Interface Science, 2018, 531, 564-569. | 9.4 | 44 |
| 62 | Electrocatalytic Methane Oxidation Greatly Promoted by Chlorine Intermediates. Angewandte Chemie - International Edition, 2021, 60, 17398-17403. | 13.8 | 43 |
| 63 | Electrolyte Driven Highly Selective CO<sub>2</sub> Electroreduction at Low Overpotentials. ACS Catalysis, 2019, 9, 10440-10447. | 11.2 | 41 |
| 64 | Efficient CO<sub>2</sub> Electroreduction to Ethanol by Cu<sub>3</sub>Sn Catalyst. Small Methods, 2022, 6, e2101334. | 8.6 | 39 |
| 65 | Purcell effect in an organic-inorganic halide perovskite semiconductor microcavity system. Applied Physics Letters, 2016, 108, 022103. | 3.3 | 36 |
| 66 | Electrochemical N2 fixation by Cu-modified iron oxide dendrites. Journal of Colloid and Interface Science, 2019, 552, 312-318. | 9.4 | 33 |
| 67 | Heterogeneous Electrocatalysts for CO<sub>2</sub> Reduction. ACS Applied Energy Materials, 2021, 4, 1034-1044. | 5.1 | 31 |
| 68 | Pushing the activity of CO2 electroreduction by system engineering. Science Bulletin, 2019, 64, 1805-1816. | 9.0 | 30 |
| 69 | Fast cooling induced grain-boundary-rich copper oxide for electrocatalytic carbon dioxide reduction to ethanol. Journal of Colloid and Interface Science, 2020, 570, 375-381. | 9.4 | 30 |
| 70 | Achieving Efficient CO<sub>2</sub> Electrochemical Reduction on Tunable In(OH)<sub>3</sub>-Coupled Cu<sub>2</sub>O-Derived Hybrid Catalysts. ACS Applied Materials & Interfaces, 2019, 11, 22346-22351. | 8.0 | 28 |
| 71 | Tuning Active Sites of MXene for Efficient Electrocatalytic N2 Fixation. CheM, 2019, 5, 15-17. | 11.7 | 28 |
| 72 | Hybrid palladium nanoparticles and nickel single atom catalysts for efficient electrocatalytic ethanol oxidation. Journal of Materials Chemistry A, 2022, 10, 6129-6133. | 10.3 | 28 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Efficient carboxylation of styrene and carbon dioxide by single-atomic copper electrocatalyst. Journal of Colloid and Interface Science, 2021, 601, 378-384. | 9.4 | 27 |
| 74 | Defectâ€Assisted Electron Tunneling for Photoelectrochemical CO<sub>2</sub> Reduction to Ethanol at Low Overpotentials. Advanced Energy Materials, 2022, 12, . | 19.5 | 27 |
| 75 | Lasing from lead halide perovskite semiconductor microcavity system. Nanoscale, 2018, 10, 10371-10376. | 5.6 | 26 |
| 76 | Automated in Vivo Nanosensing of Breath-Borne Protein Biomarkers. Nano Letters, 2018, 18, 4716-4726. | 9.1 | 26 |
| 77 | Highlyâ€Exposed Singleâ€Interlayered Cu Edges Enable Highâ€Rate CO<sub>2</sub>â€toâ€CH<sub>4</sub> Electrosynthesis. Advanced Energy Materials, 2022, 12, . | 19.5 | 26 |
| 78 | Hierarchically tubular nitrogen-doped carbon structures for the oxygen reduction reaction. Journal of Materials Chemistry A, 2017, 5, 13634-13638. | 10.3 | 24 |
| 79 | Electrocatalytic Methane Oxidation to Ethanol via Rh/ZnO Nanosheets. Journal of Physical Chemistry C, 2021, 125, 13324-13330. | 3.1 | 24 |
| 80 | Bridged-multi-octahedral cobalt oxide nanocrystals with a Co-terminated surface as an oxygen evolution and reduction electrocatalyst. Journal of Materials Chemistry A, 2017, 5, 7416-7422. | 10.3 | 23 |
| 81 | System Engineering Enhances Photoelectrochemical CO<sub>2</sub> Reduction. Journal of Physical Chemistry C, 2022, 126, 1689-1700. | 3.1 | 23 |
| 82 | Electron Localization and Lattice Strain Induced by Surface Lithium Doping Enable Ampereâ€Level Electrosynthesis of Formate from CO<sub>2</sub>. Angewandte Chemie, 2021, 133, 25945-25949. | 2.0 | 19 |
| 83 | Hydroxyâ€Groupâ€Enriched In<sub>2</sub>O<sub>3</sub> Facilitates CO<sub>2</sub> Electroreduction to Formate at Large Current Densities. Advanced Materials Interfaces, 2022, 9, . | 3.7 | 19 |
| 84 | Colloidal nanocrystals for electrochemical reduction reactions. Journal of Colloid and Interface Science, 2017, 485, 308-327. | 9.4 | 17 |
| 85 | Hydrophobically made Ag nanoclusters with enhanced performance for CO2 aqueous electroreduction. Journal of Power Sources, 2020, 476, 228705. | 7.8 | 17 |
| 86 | In situ formed Co clusters in selective oxidation of Î±-C H bond: Stabilizing effect from reactants. Molecular Catalysis, 2019, 470, 1-7. | 2.0 | 16 |
| 87 | Steric effect induces CO electroreduction to CH<sub>4</sub> on Cuâ€“Au alloys. Journal of Materials Chemistry A, 2021, 9, 21779-21784. | 10.3 | 16 |
| 88 | Oneâ€dimensional Nanomaterial Electrocatalysts for CO<sub>2</sub>Fixation. Chemistry - an Asian Journal, 2019, 14, 3969-3980. | 3.3 | 15 |
| 89 | Electrochemical Methane Conversion. Small Structures, 2021, 2, 2100037. | 12.0 | 15 |
| 90 | Atomic-Level Copper Sites for Selective CO<sub>2</sub> Electroreduction to Hydrocarbon. ACS Sustainable Chemistry and Engineering, 2021, 9, 13536-13544. | 6.7 | 14 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Transition metal oxide hierarchical nanotubes for energy applications. Nanotechnology, 2016, 27, 02LT01. | 2.6 | 13 |
| 92 | Promoting N2 electroreduction to ammonia by fluorine-terminating Ti3C2Tx MXene. Nano Convergence, 2021, 8, 14. | 12.1 | 13 |
| 93 | Lithium Vacancyâ€Tuned [CuO<sub>4</sub>] Sites for Selective CO<sub>2</sub> Electroreduction to C<sub>2+</sub> Products. Small, 2022, 18, e2106433. | 10.0 | 13 |
| 94 | Recent advances of metal nanoclusters for aerobic oxidation. Materials Today Nano, 2020, 11, 100080. | 4.6 | 11 |
| 95 | Promoting electrocatalytic carbon monoxide reduction to ethylene on copper-polypyrrole interface. Journal of Colloid and Interface Science, 2021, 600, 847-853. | 9.4 | 11 |
| 96 | Unraveling and tuning the linear correlation between CH4 and C2 production rates in CO2 electroreduction. Science Bulletin, 2022, 67, 1042-1048. | 9.0 | 11 |
| 97 | Photocatalytic CO<sub>2</sub>conversion: from C1 products to multi-carbon oxygenates. Nanoscale, 2022, 14, 10268-10285. | 5.6 | 11 |
| 98 | Electrochemical nitrogen fixation via bimetallic Sn-Ti sites on defective titanium oxide catalysts. Journal of Colloid and Interface Science, 2021, 588, 242-247. | 9.4 | 9 |
| 99 | A Crystalline Partially Fluorinated Triazine Covalent Organic Framework for Efficient Photosynthesis of Hydrogen Peroxide. Angewandte Chemie, 2022, 134, . | 2.0 | 9 |
| 100 | Electrochemical conversion of C1 molecules to sustainable fuels in solid oxide electrolysis cells. Chinese Journal of Catalysis, 2022, 43, 92-103. | 14.0 | 8 |
| 101 | Chlorine-doped carbon for electrocatalytic nitrogen reduction. Molecular Catalysis, 2020, 492, 111029. | 2.0 | 7 |
| 102 | Unconventional morphologies of CoO nanocrystals <i>via</i> controlled oxidation of cobalt oleate precursors. Chemical Communications, 2018, 54, 3867-3870. | 4.1 | 6 |
| 103 | Electrocatalytic methane oxidation to formate on magnesium based metal-organic frameworks. Journal of Colloid and Interface Science, 2022, 623, 348-353. | 9.4 | 6 |
| 104 | Unconventional mesoporous single crystalline NiO by synergistically controlled evaporation and hydrolysis. Journal of Materials Chemistry A, 2017, 5, 23840-23843. | 10.3 | 5 |
| 105 | Multiplexed Electrical Detection of Single Viruses. Materials Research Society Symposia Proceedings, 2004, 828, 97. | 0.1 | 4 |
| 106 | Precise tuning of heteroatom positions in polycyclic aromatic hydrocarbons for electrocatalytic nitrogen fixation. Journal of Colloid and Interface Science, 2020, 580, 623-629. | 9.4 | 4 |
| 107 | Electrocatalytic Methane Oxidation Greatly Promoted by Chlorine Intermediates. Angewandte Chemie, 2021, 133, 17538-17543. | 2.0 | 4 |
| 108 | Parallel and Complementary Detection of Proteins by p-type and n-type Silicon Nanowire Transistor Arrays. Materials Research Society Symposia Proceedings, 2005, 900, 1. | 0.1 | 0 |